

UNIVERSAL WASTE RULE (R-97-08)
FINAL STATEMENT OF REASONS (12/13/2001)

PROBLEM, REQUIREMENT OR OTHER CONDITION ADDRESSED

There are two problems being addressed by this regulation, which is referred to as the Universal Waste Rule:

1. Large volumes of certain hazardous wastes produced by most businesses, government agencies and households in the State are being disposed in municipal solid waste landfills which are not sited, operated, and constructed to accept hazardous waste. These mismanaged wastes include such common materials as spent fluorescent tubes and other hazardous waste lighting, hazardous waste batteries, and thermostats containing mercury. For purposes of this rulemaking, these common hazardous wastes, which pose lower individual risks than many other wastes that are primarily produced by industry, are referred to as universal wastes. It is clear that the general standards for management of other industrially generated hazardous wastes, primarily produced by industry, do not foster proper management of these universal wastes.

The mismanaged wastes pose a serious threat to human health and the environment. All of these wastes have been identified as hazardous wastes due to concentrations of toxic materials (see below in "General Statement of Reasons"). The major toxic constituent of many of these waste streams is mercury, a toxic metal posing especially serious risks for children. A very large portion of the State's lakes and rivers, including the San Francisco Bay/Delta, are under fish consumption advisories for mercury contamination. Reduction of all significant sources of mercury in the environment takes on added importance because the State is already wrestling with difficult issues of historic mining wastes in the coastal mountains and the Sierra Nevada and "fall out" from fossil fuel power plants.

2. The U.S. Environmental Protection Agency (U.S. EPA) has adopted special standards for managing universal wastes. Prior to adoption of emergency regulations on March 6, 2000 (and several subsequent readoptions), existing State law required these wastes to be managed according to the same general hazardous waste management standards as other industrially produced hazardous wastes. Health and Safety Code section 25159.5 directs the Department of Toxic Substances Control ("DTSC" or "the Department") to adopt regulations which parallel the federal regulations as much as possible without sacrificing environmental protection. Clearly, the existing regulations (prior to adoption of the emergency Universal Waste Rule regulations in March, 2000)¹ for these universal wastes are not consistent with the corresponding federal standards. Health and Safety Code

¹Those regulations were in effect before the emergency regulations were adopted and they would be in effect if the emergency package expired before this regulations package is adopted.

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section 25159.5(b) states when there is conflict between State and federal law, the more stringent requirements apply to wastes that are considered to be hazardous under State and federal law. Thus, until California adopted the emergency Universal Waste Rule in March, 2000, the more stringent State laws applied instead of the special standards of the federal Universal Waste Rule. The more stringent State laws will also apply if the State's emergency Universal waste regulations expire and no permanent State Universal Waste Rule is in place.

SUMMARY OF EXISTING STATUTES AND REGULATIONS

The United States Protection Agency (U.S. EPA) promulgated the federal Universal Waste Rule on May 11, 1995 to streamline the regulation of collection and management of common low risk hazardous wastes designated as universal wastes. These regulations are found in 40 Code of Federal Regulations part 273. The first three wastes designated as federal Universal wastes were batteries, pesticides, and thermostats. The federal Universal Waste Rule establishes alternative management standards for handlers and transporters of these Universal wastes.

In 1996, the United States Congress enacted the "Mercury Containing and Rechargeable Battery Management Act" (Federal Battery Management Act (FBMA), Public Law 104-142, 42 U.S.C. 14301 et seq.). The FBMA requires the collection and management of certain battery types to be regulated under the standards of the federal Universal Waste Rule. These battery types include used rechargeable alkaline batteries, rechargeable nickel-cadmium and sealed lead-acid batteries, alkaline-manganese and mercury containing zinc-carbon batteries, button cell mercuric oxide batteries, and other mercuric oxide batteries.

On July 6, 1999, U.S. EPA finalized a rule which added hazardous waste lamps to the federal list of universal wastes. The lamps covered by the final federal rule include fluorescent, high intensity discharge (HID), neon, mercury vapor, high pressure sodium, and metal halide lamps.

The wastes identified as universal wastes in the proposed regulations were identified as hazardous wastes in 1985 with the adoption of the State hazardous waste classification regulations. Soon thereafter, the State adopted a policy (never enshrined in statute or regulation) allowing up to 25 fluorescent tubes generated per day per location to be disposed as nonhazardous waste. No other universal waste was afforded special status until the Legislature attempted to exempt alkaline batteries. In California, Assembly Bill (AB) 1530 (Chapter 575, statutes of 1996, Health and Safety Code (HSC), section 25219 et seq.) revised state statutes to reflect the federal rechargeable battery management act. In year 2000, SB 2146, which was intended to exempt alkaline batteries from regulation as

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hazardous wastes, was vetoed by the Governor citing environmental concerns with continued disposal into nonhazardous landfills and the need to recycle the batteries.

In California, until the State's emergency Universal Waste Rule was adopted in March of 2000, all Universal wastes were subject to the full set of management standards under the State's hazardous waste control law (with the aforementioned exception of fluorescent tubes and those batteries covered by the FBMA). These standards included several statutory provisions mandating use of a manifest, use of a registered hazardous waste transporter, and the permit requirement for offsite accumulation points (Exemptions from these statutes are the subject of the Health and Safety Code section 25150.6 determination accompanying this document).

On March 6, 2000, the Office of Administrative Law (OAL) approved the Department's emergency regulations that established a Universal Waste Rule for hazardous waste batteries, thermostats, and lamps. DTSC readopted the emergency regulations several times thereafter. The Department will seek to readopt the emergency rules until this rulemaking is complete. The emergency rules closely mirror the scope and stringency of the federal Universal Waste Rule.

On August 3, 2001, the Office of Administrative Law approved emergency regulations designating certain electronic products as universal wastes when discarded. Electronic product wastes containing cathode ray tubes (CRTs) are identified as hazardous wastes by the total and extractable amounts of lead in CRTs. The emergency regulations add new article 7 to chapter 23 and make changes to some of the sections adopted in this rulemaking. This rulemaking does not and is not intended to adopt the CRT Emergency Regulations into permanent rules. That adoption will take place in a separate rulemaking. However, the text of the emergency rules is incorporated into the text adopted in this rule and is shown as italic text (*italic*).

Because the CRT Emergency Regulations were adopted separately from this package, the changes to incorporate CRT text into this rulemaking are not substantive changes. Addition of CRT Emergency Regulations text, and changes to the prior text of these regulations to accommodate the CRT Emergency Regulations, will be discussed in the detailed statement of reasons. However, the necessity of the CRT Emergency Regulations will not be established in this rulemaking.

MANDATES ON LOCAL AGENCIES OR SCHOOL DISTRICTS

DTSC has determined that these regulations do not establish any new mandates on local agencies or school districts.

SUMMARY OF THE PROPOSED RULES

The proposed State Universal Waste Rule addresses batteries, thermostats, and lamps and has some standards that are different than those specified under the federal Universal Waste Rule. These proposed regulations would amend California Code of Regulations, title 22, section 66260.10 and 66260.12 of chapter 10, section 66261.9 of chapter 11, section 66262.11 of chapter 12, section 66264.1 of chapter 14, section 66265.1 of chapter 15, section 66268.1 of chapter 18, section 66270.1 of chapter 20, and chapter 23, division 4.5.

The State Universal Waste Rule would establish special standards for universal wastes. Generators would be required to properly dispose of their universal wastes, but would be allowed much simpler storage and shipment rules; only ultimate disposal would be fully regulated under the hazardous waste facility permit program. To simplify transportation, common carriers would be allowed to transport Universal waste on a bill of lading rather than a hazardous waste manifest. Additionally, use of registered hazardous waste transporters would not be required. To promote collection for ultimate hazardous waste disposal or recycling, businesses, government entities and households would be allowed to operate as offsite accumulation points without requiring authorization from the Department.

Temporary exemptions would be offered to households and small quantity generators to allow time for household hazardous waste collection and other infrastructure solutions for recycling and disposal of universal waste to fully develop.

EFFORT TO AVOID DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS

The proposed State regulations duplicate the federal Universal Waste Rule as closely as is consistent with the Department's mission to protect Californians and the State's environment. Most of the federal management standards have been adopted almost verbatim. Some changes have been made to the scope of persons regulated and a few of the management standards. These changes are explained section by section in the detailed portion of the Statement of Reasons and their necessity is established. Any substantive differences between the State Universal Waste Rule and the federal standards are justified by environmental or public health threats and have been minimized to the extent possible. The major differences between the proposed State rule and the federal rule involve the scope of the regulated community. The U.S. EPA included several exemptions in the federal Universal Waste Rule that will be included initially in the proposed State Universal Waste Rule, but the exemptions will be phased-out in the

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proposed permanent State Universal Waste Rule. These exemptions were adopted into the State's universal waste emergency rules to allow time for the infrastructure to develop for managing large volumes of universal wastes produced by conditionally exempt small quantity universal waste generators and households. This time is especially important to develop added capacity for recycling batteries. The exemptions are being phased out in this rulemaking because they collectively would allow continued non-hazardous disposal of very large volumes of hazardous waste. Permanent, long-term adoption of these exemptions in the State would not solve the problems this rulemaking is intended to address.

The federal Universal Waste Rule requirements, 40 Code of Federal Regulations part 273, provide streamlined collection and management standards for handlers and transporters of Universal waste. The proposed State regulations will neither duplicate nor conflict with the federal regulations.

The FBMA applies the federal Universal Waste Rule requirements to specific battery types such as used rechargeable alkaline, rechargeable nickel-cadmium and sealed lead-acid batteries, alkaline-manganese and zinc-carbon batteries containing mercury, button cell mercuric oxide, and other mercuric oxide batteries. The FBMA also requires states regulating these batteries to adopt identical standards to those under the federal Universal Waste Rule. The FBMA governs only batteries regulated under the Resource Conservation and Recovery Act (RCRA). The proposed State regulations create requirements in chapter 23 that are identical to the federal regulations, but extend those requirements to all hazardous waste batteries. The State will not indefinitely apply the federal exemptions in 40 Code of Federal Regulations Part 261 hazardous waste management rules, which exempt large portions of the federally identified universal wastes. Exemptions of this magnitude fail to achieve the public health and environmental goals of this rulemaking.

The proposed chapter 23 regulations would adopt some universal waste standards which are more stringent than those included in the federal Universal Waste Rule. The more stringent standards (1) limit the storage period at transfer facilities in non-industrial zones to 6 days, as compared to 10 days under the federal law (except for batteries to remain in compliance with the FBMA) and (2) require hazardous waste lamps to be recycled to qualify for management under the universal waste standards. The federal rule does not contain a similar recycling requirement.

STUDIES RELIED ON

The principal studies relied on are the federal Universal Waste Rule requirements, 40 CFR part 273, Federal Register (FR) notices related to the federal Universal Waste Rule and

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the later modification to the economic analysis of the Lamps Rule, the Initial Study prepared by the Department of Toxic Substances Control (DTSC) under the authority of the California Environmental Quality Act (CEQA), and the Health and Safety Code section 25150.6 analysis. An additional document was incorporated as a study relied upon in the second 15 day notice of changes. This document was a study of mercury emissions from solid waste landfills performed by Oak Ridge National Laboratory by Lindberg et al. The comments received during the public workshops held by DTSC in December 1999 were evaluated and taken into consideration during the development of the proposed regulations. The FBMA was also relied upon when developing these regulations, since batteries are a waste stream regulated by the federal and State hazardous waste control programs.

Several other documents were mistakenly incorporated as studies relied up on the Initial Statement of Reasons. These documents were the Universal Waste Rule concept and scoping papers and Universal Waste Rule requirements from other states. The states that were cited were Oregon, Nevada, Minnesota, New York, Colorado, Idaho, Indiana, Connecticut, and Louisiana. While DTSC reviewed the policies of these states, their actual rules were not relied upon in formulating this rule in the meaning of Government Code section 11346.2.

ALTERNATIVES CONSIDERED

DTSC has determined that no alternative considered would be more effective in properly managing universal wastes or would be as effective and less burdensome to affected private persons than the adopted regulation. Note that other suggestions were made for modifying the proposed regulations and are discussed in the responses to comments.

Selected Alternative:

1. In the State Universal Waste Rule, Include the following waste streams, which are also included in the federal rule:

A) hazardous waste batteries (except for automotive type lead-acid batteries); B) hazardous waste thermostats; and C) hazardous waste lamps.

2. For lamps, apply universal waste designation only to lamps that are sent to an authorized recycling facility.

3. Include a more stringent requirement limiting the storage period at transfer facilities in non-industrial areas to 6 days, or 10 days in areas that have been zoned industrial. These standards are consistent with existing State statutory requirements.

4. Apply the federal Universal Waste Rule regulatory approach to non-RCRA hazardous waste streams. For example, in the proposed State rule, all hazardous waste batteries (except automotive-type batteries) are included, both RCRA hazardous waste batteries and non-RCRA hazardous waste batteries. Automotive type lead acid storage batteries would continue to be regulated under California's current lead-acid battery recycling program.

5. Phase-out certain exemptions for households and Conditionally Exempt Small Quantity Generators. These exemptions are part of the federal Universal Waste Rule and the State's emergency regulations.

6. Initiate the designation of new universal wastes in the future through both the Administrative Procedures Act petition process and the independent DTSC/ Department rule making process rather than use the petition process approach that is used in the federal Universal Waste Rule.

Rejected Alternatives:

1. Do nothing.

This alternative was rejected because it does not address the inconsistencies between California's hazardous waste program, hazardous waste programs in other states, and the federal Universal Waste Rule, which may cause confusion for the regulated community. Additionally, under this alternative, all the universal wastes would remain subject to the full hazardous waste regulations in California. Both U.S. EPA and DTSC have concluded that the full hazardous waste management standards would be less effective at protecting human health and the environment than the universal waste requirements because the expense of complying with the full hazardous waste management standards provides an incentive for illegal disposal of universal wastes. This alternative also fails to take advantage of the opportunity to align the waste management requirements for universal wastes with their lower level of public health or environmental risk.

2. Adopt a State Universal Waste Rule with the exact same provisions as the federal Universal Waste Rule.

This alternative was rejected for two reasons. First, it does not emphasize recycling of lamps over disposal. The federal Universal Waste Rule allows either the disposal or recycling of universal wastes. Second, the federal Universal Waste Rule allows generators to use the conditionally exempt small quantity generator exemption and the exemption for households in 40 Code of Federal Regulations, Part 4, sections 261.5 and 261.4 respectively. Thus, under the federal rule, generators of less than 100 Kg/month of total

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hazardous and universal waste and households are allowed to continue to dispose of their universal waste in the solid waste disposal sites designed and managed for nonhazardous waste. DTSC believes adopting both exemptions would allow continued inappropriate disposal of a large portion of the State's universal waste. This would not achieve the goal of diverting most of the universal waste from the solid waste stream and landfills.

3. Adopt a petition process similar to the one in the federal Universal Waste Rule. That process allows anyone to petition a state, which is authorized to implement the Universal waste program, to add additional wastes or waste streams to the state list without requiring the waste(s) to also be added at the federal level.

This alternative was rejected because addition of wastes to California's universal waste program can easily be initiated through the existing process, filing a petition for rulemaking under the provisions of the Administrative Procedures Act found in Government Code, 11340.6. Therefore, formal addition of the federal Universal Waste Rule petition process is not necessary or appropriate.

4. Alternative offered in comment (see comment L10, Initial 60 day public comment period, Della Bosquest, California Technology, Trade, and Commerce Agency): Exempt households and conditionally exempt small quantity universal waste generators from the requirement to dispose of universal waste in facilities authorized to recycle or dispose of hazardous waste. Use incentives, education, and other similar efforts to encourage voluntary proper disposal of universal waste.

This alternative was rejected because the experience of the Department has been that not only must the government require proper management to protect human health and the environment from the risks of hazardous wastes, it must then actively enforce these rules. While the Department agrees that some persons may be convinced to properly dispose of their universal wastes under a voluntary program, the majority would continue to dispose of their universal wastes in the cheapest and simplest manner - nonhazardous disposal. While extensive takeback and alternative disposal programs may also induce some households and small generators to properly dispose of their universal waste, the easiest disposal alternative would remain the trash container. Only a prohibition on disposal of universal waste into nonhazardous solid waste landfills and the environment at large will ultimately drive proper disposal or recycling.

Authority and Reference: No changes from the Initial Statement of Reasons.

GENERAL STATEMENT OF REASONS

Organization and Numbering:

The organization of the proposed California Universal Waste Rule regulations differs from the federal regulations. The federal regulations are organized using part, subpart, section, and subsection designations, while the proposed regulations are organized using chapter, article, and section designations consistent with the format of the California Code of Regulations. The State organizational designations are used in lieu of the federal designations. The following lists show the direct correlation between the State and federal organizational designations.

<u>Federal</u>	<u>State</u>
part	chapter
subpart	article
section	section
paragraph	subsection
(a)	(a)
(1)	(1)
(I)	(A)
(A)	1.

Justification for Generic Language Changes:

The regulation language contains three primary generic language changes that are made throughout the regulation text in order to convert the federal text to equivalent State text. The changes are:

1. Federal references to State references. Internal references are being changed from references to the 40 Code of Federal Regulations to references to the appropriate State proposed regulations.
2. "Must" to "shall." The word "must" is being changed to the word "shall" to conform to the general usage of this term in the California Code of regulations.
3. "And/or" to "or." The use of the term "and/or" may be confusing to the regulated community and is being changed to conform to the general usage in the California Code of Regulations.

General Discussion of the Proposed Regulations

This portion of the Statement of Reasons provides the overall rationale for adopting these

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rules and the reasons for varying, in certain instances, from the federal rule with regard to the scope and stringency of the State regulations.

Status of Universal Waste Prior to the Emergency Universal Waste Rule: DTSC's Universal Waste Rule designates three wastes as universal wastes. DTSC has already identified these as hazardous wastes by application of the pre-existing State toxicity criteria (prior to 1991) and the State's toxicity characteristic (after 1991). The pre-existing waste classification regulations established important portions of the State's waste classification program. Regulatory thresholds were adopted, which established levels at which wastes were classified as hazardous due to a number of different criteria, including: (a) toxicology criteria (acute oral LD₅₀, etc.); (b) extractable levels of specified metals and organics; and (c) total concentrations of specified metals and organics. The materials proposed today as universal wastes previously met at least one of these criteria and were identified as hazardous wastes subject to the standards of the hazardous waste control law. A summary of some of the reasons why universal wastes were previously identified as hazardous waste follows:

Batteries:

- Corrosivity: For alkalinity (alkaline batteries) or acidity (lead-acid storage batteries)
- Soluble Threshold Limiting Concentration (STLC): Cadmium, copper, lead, silver, mercury, zinc, nickel
- Total Threshold Limiting Concentration (TTLC): Cadmium, copper, lead, silver, mercury, zinc, nickel
- Toxicology standards: Cadmium, copper, lead, silver, mercury, zinc, nickel

Thermostats:

- Soluble Threshold Limiting Concentration (STLC): Mercury
- Total Threshold Limiting Concentration (TTLC): Mercury
- Toxicology standards: Mercury

Lamps:

- Reactivity: For sodium vapor lamps

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- Total Threshold Limiting Concentration (TTLC): Mercury
- Toxicology standards: Mercury

All wastes proposed as universal wastes became subject to all the standards of the hazardous waste control law in 1985 when the California Assessment Manual was placed into regulation. Since that time, regulation and management of these wastes has been inconsistent. In some instances, the hazardous waste control law has been fully enforced for some of these wastes while others have been allowed to escape active regulation. Also, only a few entities have complied with the law, while a vast majority of generators of universal waste have not transported or disposed of their waste properly.

Batteries: For many years, special standards in regulations have fostered recycling of spent lead-acid storage batteries. Due to these regulations and active enforcement, California has a very high recycling rate for automotive type batteries and is not proposing to designate automotive type lead acid storage batteries as universal waste. Other batteries have been regulated less aggressively including mercury batteries, silver cells, lithium batteries, and nickel-cadmium batteries. Alkaline and zinc carbon cells have not been actively regulated; in fact, a statute exempts all batteries that are hazardous solely due to zinc content from regulation. (Health and Safety Code section 25216.3) This statute has proven to be ineffective because all batteries containing zinc, when tested, demonstrate they are hazardous for zinc and corrosivity and, sometimes, copper; thus, few, if any batteries qualify for the statutory exemption.

Thermostats: All thermostats that contain mercury (along with all other types of mercury switches) have been identified as hazardous wastes due to their elemental mercury content. There have been no enforcement moratoria or management memoranda purporting to exempt these wastes from regulation.

Lamps: Hazardous waste lamps include many lamps with mercury and others with reactive sodium. Prior to the adoption of the Universal Waste Emergency Regulations, there was a long standing and widely publicized policy in place allowing disposal of up to 25 fluorescent tubes per day in nonhazardous municipal solid waste. No other enforcement moratoria or management memos exempted any other hazardous waste lamps from regulation.

As hazardous wastes under State law, all the materials (with the partial exception of fluorescent tubes) have been subject to all the standards of the hazardous waste control law for many years, including generator standards, manifesting and hazardous waste transporter requirements, and disposal or recycling at an authorized facility. Realistically, many persons have not complied with the hazardous waste management standards for

these wastes. For instance, few people have discarded flashlight batteries via a hazardous waste transporter on a manifest and few flashlight batteries have gone to Class I hazardous waste disposal sites. Likewise, to date, enforcement actions have generally not been initiated against households and businesses that improperly dispose of batteries.

The State's Universal Waste Emergency Regulations: The regulatory status of all the wastes identified as universal wastes changed on March 6, 2000 when California's Universal Waste Emergency Regulations were adopted. These rules essentially applied the federal universal waste management standards to most hazardous waste batteries and all hazardous waste lamps and thermostats. The emergency regulations addressed hazardous waste batteries, lamps, and thermostats including both those regulated under Federal law (RCRA hazardous waste) and those regulated only under State law (non-RCRA hazardous waste). While the scope of the emergency rule was broader than that of the federal rule, the actual management standards were identical to those of the federal universal waste rule. Two exemptions found in the federal law were adopted:

- **Household exemption:** The federal Universal Waste Rule permits households to manage Universal wastes as hazardous waste pursuant to general RCRA hazardous waste rules or pursuant to the federal Universal Waste Rule. Because RCRA exempts households from federal hazardous waste management requirements, the federal hazardous waste control regulations essentially allow households to manage and dispose of Universal wastes as nonhazardous waste.

In its emergency regulations, California adopted a household exemption with a somewhat narrower scope than the federal rule. The exemption applies only to universal wastes produced by true private households rather than the broader set of households exempted under the federal household exemption, which includes groups facilities, etc. The State adopted a household exemption because the State's household hazardous waste programs were not prepared or funded to manage the large volumes of universal waste expected. Especially problematic were space intensive and fragile wastes such as lamps.

- **Small quantity exemption:** Under the Universal Waste Rule emergency regulations, "conditionally exempt small quantity universal waste generators" are not required to manage or dispose of their universal waste as hazardous waste. The exemption in the State's emergency regulations parallels the federal conditionally exempt small quantity generator exemption found in the 40 Code of Federal Regulations, section 261.5, but is narrower in scope because it creates a temporary exemption for only universal waste rather than all hazardous waste. This exemption was adopted to allow a collection and recycling infrastructure to develop smoothly, without a sudden overload on the management system.

The Department feared that immediate regulation of all universal waste generators would divert so many fluorescent tubes (and other universal wastes) to recyclers and disposal facilities that they would be overloaded. Overloading the destination facilities would have raised the danger of mismanagement and site contamination. It may have also provided an incentive for excessive recycling and disposal fees that would injure California businesses.

These Regulations: The proposed regulations generally mirror the federal universal waste rule with some modifications.

How do these Regulations Differ from the Federal Regulations?

- Scope of universal wastes: Under the State rule, universal wastes include not only those identified as hazardous wastes under the federal program (RCRA hazardous waste), but also those identified as hazardous under State law but under federal law (non-RCRA hazardous waste). Almost all hazardous waste batteries are included, as are all hazardous waste thermostats and all hazardous waste lamps. If the Department were to include only those regulated under the federal program while preserving existing law for the non-RCRA subset, determination of which wastes were subject to which rules by businesses unfamiliar with the State's hazardous waste control law would be very confusing and the regulation would fail the clarity standard required by the Administrative Procedure Act. Additionally, regulating certain RCRA and non-RCRA waste as universal waste provides a higher level of protection to the environment.

Exclusion of canceled and suspended pesticides: The Department has chosen not to include pesticides in this rule. See the discussion below for further information.

- "Recycle Only" Standard for Lamps: DTSC is proposing to require that all lamps be recycled in order to qualify for management under the universal waste rule. This standard is proposed because the State has adequate capacity in three authorized lighting waste recyclers to recycle all the lighting wastes expected to be managed under the universal waste rule. At this point, the lighting waste recyclers can handle about 70% of the fluorescent tubes generated in California (the largest class of hazardous waste lighting wastes making up the bulk of hazardous waste lamps). With planned capacity additions, the authorized lighting waste recyclers will be able to recycle all the State's hazardous waste lamps and accept additional lamps from out of state generators.

Recycling is especially important for mercury containing lamps. Mercury does not

form stable oxides and other compounds as do other toxic heavy metals. It is very difficult to stabilize mercury for permanent sequestration from the environment. By recycling and reusing the mercury from the lamps, disposal is avoided and generation of new mercury is minimized. Note that the State of California has a very serious mercury problem arising from "fallout" from air emissions from fossil fuel power plants and landfills (primarily from broken fluorescent tubes), mercury mining wastes, and mercury in the upper Sacramento and San Joaquin River systems from historic gold mining practices.

The U.S.EPA and the State's regional water quality control boards are in the process of setting total maximum daily loading limits (TMDLs) for the San Francisco Bay/Delta. These TMDLs will be very difficult to achieve given the many sources of mercury in the State's environment. Removing the contribution by fluorescent tubes and other lighting wastes is an important component of meeting the TMDLs.

Why is DTSC Adopting the Universal Waste Rule?

The Department is adopting the universal waste standards to be applied in lieu of the full hazardous waste control law because it agrees with U.S.EPA that regulation under universal waste standards will divert more universal waste from the solid waste stream to proper recycling and disposal. There are a number of reasons why the Department has reached this conclusion:

- Universal waste standards in California will regulate approximately one million individual businesses and over 3 million households rather than the 72,000 active generators of other hazardous wastes.
- There are obviously too many individual businesses and households to address and inspect effectively within the constraints of the existing generator regulatory program.
- The complexity and cost of the full hazardous waste control regulations serve as an incentive for illegal and environmentally improper disposal. Universal wastes are small (batteries) or can be broken and easily hidden (lamps) making detection of illegal transportation and disposal difficult.
- The existing hazardous waste control law is written to address an unlimited variety of hazardous wastes. It applies requirements tailored for a wide variety of wastes with a vast range of physical states that pose a wide range of threats. Universal wastes, on the other hand, are a finite subset of hazardous wastes in definite, well-

understood physical states that pose well-characterized hazards.

- The existing hazardous waste control law is tailored to a small number of industrial businesses and a smaller subset of other affected businesses. These businesses expect to be regulated for their hazardous waste and are generally familiar with the rules. Universal wastes, on the other hand, are generated by virtually all businesses and most households; these entities predominately neither know nor understand the full hazardous waste control law.

A much more thorough discussion of the rationale behind the universal waste standards is found in U.S.EPA's preamble to the universal waste proposed and final rules and the rule adding hazardous waste lamps to the universal waste rule. These documents are listed in the summary of Authority and References and have been incorporated by reference into this Statement of Reasons.

Why Did DTSC Omit Waste Pesticides From the State Universal Waste Rule?

DTSC has chosen not to include canceled and suspended pesticides in this rule for two reasons. First, Health and Safety Code section 25207 et seq. establishes a system where an agricultural commissioner can hold a waste pesticide collection event. This system does not exempt the waste pesticides from the protective standards of the hazardous waste control law to the extent that the universal waste rule does, yet it provides a simple disposal solution to farmers and others holding waste pesticides. The program has operated successfully in the State for many years and does not require change.

The second reason why pesticides are not being designated as universal wastes is that the universal waste standards are inappropriate for most canceled and suspended pesticides. Universal wastes are lower risk wastes generated in smaller quantities by most sectors of the population. Pesticides usually do not meet any of these criteria. While the liquid mercury in lamps and thermostats is contained in very small individual amounts, pesticides (under the federal Universal Waste Rule) can be managed as universal wastes in tank car amounts. Likewise, the federal universal waste rule applies to canceled and suspended pesticides. The pesticides most likely to face cancellation of uses and suspension are the ones with adverse impacts that cannot be mitigated. For instance, recent federal actions have canceled many uses of the organo-phosphate pesticides ethyl-parathion and chlorpyrifos. These materials have extremely high acute toxicity. In fact, ethyl parathion is one of the most toxic materials used in our society. Nonetheless, the federal Universal Waste Rule allows these wastes to be handled pursuant to the federal Universal Waste Rule's relaxed standards.

The inappropriateness of regulating pesticides as universal waste is demonstrated

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unambiguously by the 1991 railroad accident in Dunsmuir, California, when a railcar load of a low toxicity herbicide, meta sodium, derailed into the upper Sacramento River. While this material was not even identified as a hazardous material under federal transportation rules, it killed all life in 45 miles of the Upper Sacramento River and would have killed all life down to and in the Sacramento/San Joaquin Bay/Delta if not for dilution in the huge volume of Lake Shasta. Nonetheless, the federal Universal Waste Rule allows a wide variety of pesticides in large quantities such as in tank cars, or rail cars to be managed under the more lenient requirements. California does not want to adopt similar rules that could increase the odds and severity of such accidents by removing such protective standards as the use of a uniform hazardous waste manifest and a registered hazardous waste transporter for waste pesticides.

Why is DTSC Phasing Out the Conditionally Exempt Small Quantity Generator Exemption?

The Department has proposed retaining the State version of the federal Conditionally Exempt Small Quantity Generator Exemption for only four years. After that time, the exemption would sunset and all commercial universal wastes would be regulated as universal wastes. The Department is not proposing a permanent small quantity exemption because that would allow a very large volume of hazardous waste to escape regulation in the long term and would fail to fully address the public health problem for which the regulations are being adopted. The Department estimates that only 30% - 70% (30% estimated by General Electric Lighting and 70% by the U.S. EPA) of the universal wastes would be diverted from nonhazardous disposal sites if this exemption were retained.

Considering fluorescent tubes, the predominant universal waste by volume, a building that generates no other hazardous wastes would have to be larger than 500,000 ^{ft} before the quantity of tubes generated on a monthly basis would surpass the 100 kg level for exemption under the federal universal waste rule. Only a few large urban buildings exceed this size. For example, only 22 of the buildings owned and managed by the State of California are larger than 500,000 ft². Clearly, a universal waste rule with a small quantity exemption would improve the situation vis-a-vis mercury in the environment and other universal waste toxic constituents in landfills, but it would ultimately fail to address the problem completely and effectively.

DTSC is proposing to extend the exemption found in the emergency regulations for four years after the adoption of the permanent rules. This extension is intended to allow time for: (a) smaller businesses to become educated on the proper management of universal wastes; (b) household hazardous waste facilities to prepare for collection of universal waste; (c) allow the local agencies that inspect generators (the Certified Unified Program Agencies or CUPAs) to develop protocols and staffing to inspect such generators; and (d)

allow the infrastructure for collection, transportation, and recycling/disposal of universal wastes to further develop.

However, the proposed regulations allow the conditionally exempt small quantity universal waste generator exemption to remain at the quantity level of the emergency regulations for only two years. After two years, the quantities allowed to go to nonhazardous disposal would be reduced by about a factor of ten. This two year period is given to allow the universal waste collection and management infrastructure to develop in a stepwise and orderly manner. Additionally, the phased-in approach will give DTSC and local agencies time to inform the vast numbers of universal waste generators that the exemption level will drop from the level provided in the emergency regulations and give previously exempt generators time to prepare to manage their universal waste properly. The development of infrastructure, the education campaign, and sufficient time for generators to plan for proper management are necessary to avoid having large numbers of generators in non-compliance through ignorance as the emergency rules are superseded by the permanent rules with their lower level of exemption.

Why is DTSC Phasing Out the Household Exemption?

The rationale behind elimination of the household exemption is similar to that for the small quantity generator exemption. Currently, the primary disposal solution for households is the various household hazardous waste collection facilities. At this time, those facilities are not able to collect and manage the large volumes of universal waste (primarily fluorescent tubes) expected from households. Fluorescent tubes are especially problematic for household hazardous waste collection facilities due to their fragility and large volume of, essentially, argon gas. Additionally, while universal wastes are generated in very small quantities by individual households, large aggregate volumes are generated by all the households combined and could, in some instances, seriously stress the financial resources or household hazardous waste collections.

The Department is proposing to sunset the household exemption four years after the adoption of the permanent regulations. During this time, the Department will work with the California Integrated Waste Management Board and the Household Hazardous Waste Information Exchange to develop plans and secure funding for collection and disposal of universal wastes and to foster development of private sector solutions such as take back programs and commercial universal waste collection, accumulation, and transshipment businesses.

Note that the Department will closely follow progress in both infrastructure development and funding improvements for household hazardous waste collections. If funding sources

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and infrastructure capacity are not forthcoming in the State, or certain parts of the State, the Department may extend the household and/or the small quantity exemptions by emergency regulation and permanent regulatory change until the infrastructure adequately develops.

DTSC is proposing to sunset both the household and conditionally exempt small quantity universal waste generator exemptions for all batteries including those covered by the FBMA. Careful examination of the FBMA and the federal Universal Waste Rule reveals that the applicable standards for conditionally exempt small quantity generators and households under the 40 Code of Federal Regulations, section 273.8 is the option of managing them as universal waste. This interpretation is consistent with the mandate of the FBMA to establish a uniform set of standards for managing these batteries, the Universal Waste Rule. The federal Universal Waste Rule text is the text required by the FBMA. The alternative standards to the Universal Waste Rule are not enumerated in the incorporation by reference in the FBMA; the FBMA incorporates the regulations adopted on 5/11/1995. The section was identified at that point as 40 Code of Federal Regulations, section 373.5. It has since been renumbered as the 40 Code of Federal Regulations, section 273.8. The language of 40 Code of Federal Regulations, section 273.8 reads:

“Sec. 273.8 Applicability--household and conditionally exempt small quantity generator waste.

(a) Persons managing the wastes listed below may, at their option, manage them under the requirements of this part:

(1) Household wastes that are exempt under Sec. 261.4(b)(1) of this chapter and are also of the same type as the universal wastes defined at Sec. 273.9; and/or

(2) Conditionally exempt small quantity generator wastes that are exempt under Sec. 261.5 of this chapter and are also of the same type as the universal wastes defined at Sec. 273.9.

(b) Persons who commingle the wastes described in paragraphs (a)(1) and (a)(2) of this section together with universal waste regulated under this part must manage the commingled waste under the requirements of this part.”

Note that the reference to both exemptions in this regulation is used to identify classes of generator under the federal rules. It does not create exemptions nor does it apply those exemptions through the plain language of section 273.8. This section merely gives the conditionally exempt small quantity generator or the household the option of managing universal wastes under the Universal Waste Rule and is silent on the alternative. The alternative is clearly management under the hazardous waste rules which contain the above exemptions under federal law but not under State law. Thus, adopting the federal hazardous waste law exemptions is not required by the FBMA.

**DETAILED STATEMENT OF REASONS/NON-CONTROLLING PLAIN ENGLISH
SUMMARY**

Amend Section 66260.10, Definitions:

This section is amended by adding, in alphabetical order, definitions for the terms: "battery," "conditionally exempt small quantity universal waste generator," "destination facility," "household," "lamp," "large quantity handler of universal waste," "small quantity handler of universal waste batteries," "thermostat," "universal waste," "universal waste handler," "universal waste transfer facility," and "universal waste transporter" as defined in section 66273.9. The definitions are placed in this section to create an all inclusive dictionary of the terms important to hazardous waste management, but are repeated later in section 66273.9. The repetition is necessary because the Universal Waste Rule is intended to be a "stand alone" regulation for most generators and handlers of universal waste. These persons may miss the fact that definitions central to the Universal Waste Rule were placed in a section outside the bulk of the Universal Waste Rule regulations. This section conforms to the parallel federal regulation with the exception of the addition of the "household" definition.

Note that this section was also amended by the Cathode Ray Tube Emergency Regulations to incorporate definitions central to that rulemaking which are shown in italic (*italic*) text in the final text document.

Amend Section 66261.9, Requirements for Universal Waste:

This section is added to article 1, chapter 11, and specifies that batteries, thermostats, and lamps are exempt from regulation under chapters 12 through 20. These wastes are eligible for handling in accordance with management standards for universal waste found in chapter 23 in lieu of existing hazardous waste management standards. This section conforms to the parallel federal regulation with the exception that DTSC decided not to list canceled and suspended pesticides as a universal waste.

The language as proposed has been modified by the Cathode Ray Tube Emergency Regulations. New subsection (b) has been added incorporating the conditional exemption from regulation as hazardous waste for cathode ray tubes managed as universal waste. The previously proposed subsection (b) is redesignated as (c) and the wastes discussed in the new subsection (b) are also now designated as universal wastes. These changes are made to accommodate the Cathode Ray Tube Emergency Regulations and do not make substantive changes to the regulations as proposed.

Amend Section 66262.11, Hazardous Waste Determination:

This section is amended by adding the words "and 23," since the proposed regulations would add standards for generators of universal waste. This section specifies that a generator of hazardous waste shall refer to chapters 14, 15, 18, and 23 to determine if there are possible exclusions or restrictions pertaining to management of the specific wastes. This amendment conforms to the parallel federal action.

Amend Section 66264.1, Purpose, Scope, and Applicability:

This section is amended by adding subsections (g)(12)(A) through (g)(12)(C). This section adds universal waste handlers and universal waste transporters to the list of persons who are not subject to chapter 14 standards applicable to owners and operators of hazardous waste transfer, treatment, storage and disposal facilities. Instead, handlers and transporters of universal wastes are subject to chapter 23 requirements. This amendment conforms to the parallel federal action.

Amend Section 66265.1, Purpose, Scope, and Applicability:

This section is amended by adding subsections (d)(15)(A) through (d)(15)(C). This amendment adds universal waste handlers and universal waste transporters to the list of persons who are not subject to the chapter 15 interim status standards for owners and operators of hazardous waste transfer, treatment, storage and disposal facilities. Instead, handlers and transporters of universal wastes are subject to chapter 23 requirements. This amendment conforms to the parallel federal action.

Amend Section 66268.1, Purpose, Scope, and Applicability:

This section is amended by adding subsections (j)(1) through (j)(3). This amendment exempts universal waste handlers and universal waste transporters from the land disposal restrictions requirements under sections 66268.7 and 66268.50. Instead, handlers and transporters of universal wastes are subject to chapter 23 requirements. This amendment conforms to the parallel federal action.

Amend Section 66270.1, Purpose and Scope of These Regulations:

This section is amended by adding subsections (c)(2)(E)1 through (c)(2)(E)3. These

proposed amendments exempt universal waste handlers and universal waste transporters from the hazardous waste permit requirements of chapter 20. Instead, handlers and transporters of universal wastes are subject to chapter 23 requirements. This amendment conforms to the parallel federal action.

Amend Chapter 23, Standards for Universal Waste Management:

This proposed chapter is added to title 22, division 4.5, to specify the management standards for lower risk hazardous wastes designated as universal wastes.

Amend Article 1, General:

This proposed article specifies the applicability of universal waste management standards to designated universal wastes and creates two temporary exemptions.

Amend Section 66273.1, Scope:

This proposed section establishes chapter 23 requirements for the management of the following universal wastes:

- 1) batteries as defined in section 66273.2;
- 2) thermostats as defined in section 66273.4; and
- 3) lamps as defined in section 66273.5.

These proposed chapter 23 management standards are an alternative to the existing waste management regulations found in chapters 10 through 21.

This section parallels the language found in 40 Code of Federal Regulations, section 273.1, except that pesticides will not be a designated universal waste in California. The proposed chapter 23 management standards will have a review date of five years from their effective date. The necessity for not including pesticides is discussed in detail in the general statement of reasons above.

The language of this section has been modified non-substantively in the final text to incorporate and be consistent with the changes made separately by the Cathode Ray Tube Emergency Regulations. Subsection (a)(4) has been added and preceding subsections changed nonsubstantively to accommodate the new subsection. The necessity of adding subsection (a)(4) is not established in this rulemaking; it was

incorporated in a separate emergency rulemaking.

Amend Section 66273.2, Applicability--Batteries:

This proposed section applies the proposed chapter 23 requirements to persons managing batteries as described in section 66273.9, unless: 1) the batteries are not yet wastes as described in chapter 11, or 2) the batteries are not hazardous wastes exhibiting one or more of the hazardous waste characteristics identified in chapter 11. Automotive type lead-acid batteries managed under the recycling requirements of chapter 16, article 7, will continue to be subject to the current requirements and, therefore, are not designated as universal wastes.

Automobile batteries are not being addressed by this rule, in contrast to the corresponding federal rule, because they are already managed under an efficient and effective set of special management standards. In fact, California has one of the highest automobile battery recycling rates in the country. The Department believes that retention of the current system without the confusion of a dual system or a switch to the universal waste system gives the State the best management system for automobile batteries.

A change was made to this section in the first 15 day notice of changes that removes the phrase "consumer type" when discussing spent lead acid storage batteries. This change is necessary to conform to the FBMA which requires management of all spent lead acid storage batteries, other than "cranking batteries," as universal waste.

This section parallels the language found in 40 Code of Federal Regulations part 273, subpart A, section 273.2, except that this section, contrary to the federal rule, will also cover non-RCRA batteries.

Section 66273.3, [Reserved]

This section is reserved and will not be used at this time. The corresponding federal section incorporates pesticides into the Universal Waste Rule. DTSC has determined that pesticides should not be managed as universal wastes (see discussion above in the "General Statement of Reasons.")

Amend Section 66273.4, Applicability--Mercury Thermostats:

This proposed section applies the proposed chapter 23 requirements to persons managing thermostats as described in section 66273.9, unless: (1) the thermostats are not

yet wastes as described in chapter 11; or (2) the thermostats are not hazardous wastes exhibiting one or more of the hazardous waste characteristics identified in chapter 11.

This section parallels the language found in 40 Code of Federal Regulations, section 273.4, except that, contrary to the federal regulations, the proposed State regulations do not require reclamation because reclamation is a subset of recycling or a type of recycling.

Amend Section 66273.5, Applicability--Lamps:

This proposed section applies the proposed chapter 23 requirements to persons managing lamps as described in section 66273.9, unless: (1) the lamps are not yet wastes as described in chapter 11; (2) the lamps are not hazardous wastes exhibiting one or more of the hazardous waste characteristics identified in chapter 11; or (3) the lamps are not destined for recycling.

This section parallels the language found in 40 Code of Federal Regulations, section 273.5, except that, contrary to the federal regulation, the universal waste management standards only apply if the lamps are destined for an authorized recycling facility.

The Department is requiring ultimate recycling for lamps as a condition of universal waste management (vs. the normal hazardous waste requirements) for several reasons:

- Lamp recyclers in the State can currently recycle over 70% of the tubes used each year in the State. Planned capacity increases will bring capacity in-State to over 100%. Additionally, a number of out-of-State businesses are already recycling California lamps.
- Recycling is preferable to disposal because it conserves the State's resources and avoids mining of new mercury with the attendant mining waste production.
- Mercury in lamps is very difficult to sequester permanently. It does not form stable long lasting, non-volatile, and insoluble compounds. This disposal of lamps to landfills can create long-term problems. The U.S. EPA treatment standard for mercury is recycling - an implicit admission that no effective technology in use can permanently sequester mercury from the environment.
- The California Legislature, in Health and Safety Code section 25179.4, stated that the second priority for the Department's program, after source reduction (do not produce waste at all), is to encourage recycling of the hazardous waste.

Section 66273.6, [Reserved]

This section was reserved and will not be used in this rulemaking. This action parallels the language found in 40 Code of Federal Regulations, section 273.6, which is also reserved. However, the final text of this regulation designates this section as "Section 66273.6, Applicability - CRT Materials". This change was made in the Cathode Ray Tube Emergency Regulations and the change is made non-substantively in this rulemaking. This rulemaking does not establish the necessity for designating this section as the applicability section for CRT materials, it nonsubstantively accommodates the change made in the separate rulemaking.

Section 66273.7, [Reserved]

This section is reserved and will not be used at this time. This section parallels the language found in 40 Code of Federal Regulations, section 273.7, which is also reserved.

Amend Section 66273.8, Applicability--Household and conditionally exempt small quantity generator waste:

This section sets forth two types of exemption:

Households

Conditionally Exempt Small Quantity universal waste Generator

1. Batteries: The FBMA mandates that all batteries covered by the FBMA be managed according to the provisions of the federal Universal Waste Rule. This mandate literally adopts the federal Universal Waste Rule standards adopted on May 11, 1995. The federal standards adopted on that date (in 40 Code of Federal Regulations, section 273.5, since renumbered as 273.8) allows the option of managing batteries as universal waste, but is silent as to the alternative to universal waste management. The only reasonable interpretation of this option is that the alternative is the regulatory system that would be in place if a battery were not regulated under the Universal Waste Rule. In California, this system is the full hazardous waste control law, which lacks exemptions for household and conditionally exempt small quantity generators. If a generator chooses to manage universal waste as hazardous waste under the federal rules, that generator can take advantage of two types of federal exemptions: Household and Conditionally Exempt Small Quantity Generator. These options are not available under the alternative to universal waste management in California, the general hazardous waste management requirements. The exemptions for hazardous waste under the federal hazardous waste control law (household and conditionally exempt small quantity generator) are not incorporated by the federal Universal Waste Rule, but are part of the federal alternative

regulatory system under the 40 Code of Federal Regulations hazardous waste rules. The FBMA mandates that the batteries be eligible for management under identical standards to the federal Universal Waste Rule, not the federal hazardous waste control law. One of the stated purposes of the FBMA is to manage batteries covered by the FBMA under a uniform national set of requirements. In adopting State Universal Waste Rule standards for batteries which are identical to those of the federal Universal Waste Rule, without allowing permanent exemptions under alternative rules, DTSC has not only satisfied the mandate of the FMBA, but has complied with its intent to regulate certain batteries in a uniform manner and to divert these batteries from the solid waste landfill system.

2. Proposed exemptions: A household and small quantity exemption is included for California universal wastes. The amount of waste allowed to be disposed as nonhazardous waste by conditionally exempt small quantity universal waste generators is reduced after two years and goes to zero after four years (see discussion in the "General Statement of Reasons" above). DTSC is allowed to establish these temporary exemptions because the federal Universal Waste Rule gives generators the option of managing universal waste either under the Universal Waste Rule standards or the hazardous waste management standards. The federal hazardous waste control law contains a household (40 Code of Federal Regulations, section 261.4(b)(1)) and a conditionally exempt small quantity generator exemption (40 Code of Federal Regulations, section 261.5). While these exemptions are not part of the federal Universal Waste Rule, a conditionally exempt small quantity generator or householder can, under federal law, opt to manage their universal waste as hazardous waste and, if eligible, gain the exemptions. The proposed State exemptions are not broader in scope than the federal exemptions because they exempt only persons who would also be exempted under the optional hazardous waste management system allowed by the federal Universal Waste Rule. Thus, the proposed temporary exemptions are consistent with the mandate of Health and Safety Code section 25159 to adopt regulations which allow the State to maintain its RCRA authorization. The phaseout of the exemptions is also consistent with federal law because an authorized state may adopt rules that are more stringent than federal law.

The exemptions differ from the federal hazardous waste exemptions in the following ways:

Household Exemption: This exemption is applied to only true private households (as defined in proposed section 66261.9) rather than the expansive federal definition of household. The State definition does not apply to such commercial activities as hotels, motels, and campgrounds.

Conditionally Exempt Small Quantity Generator Exemption: This proposed exemption applies only to businesses whose total generation of universal waste plus other RCRA hazardous wastes is equal to or less than 100 kilograms/month for

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the first two years. The exemption is then reduced and the definition of who is a conditionally exempt small quantity universal waste generator is correspondingly reduced at the end of the first two years of exemption. The generator must also be in compliance with 40 Code of Federal Regulations, section 261.5 and must manage the wastes according to that section. However, the stated allowance for either hazardous waste or solid waste disposal is in compliance with that federal regulation.

This exemption was originally conditioned further by allowing nonhazardous disposal of only 25 fluorescent tubes per day per location to be consistent with both the emergency regulations which preceded this rulemaking and the long standing policy which has governed disposal of fluorescent tubes since the early 1980's. DTSC then removed this limitation on the amount of tubes that can be disposed as nonhazardous waste per day in response to comments received during the original 60 day comment period.

This section parallels the effect of 40 Code of Federal Regulations, section 273.8, except:

1. The State's version of the household and conditionally exempt small quantity generator exemptions will sunset after four years for reasons set forth in the "General Statement of Reasons."
2. "Household" is defined as a private household and does not include the commercial households exempted under the federal household exemption.
3. The amounts of waste allowed to be disposed at nonhazardous landfills is less than would be allowed under the federal rule because the State rule counts universal waste in the total amount of hazardous waste generated and reduces the amount of waste exempted after the first two years.

For further discussion of the necessity both for the temporary exemptions and the phase out of the conditionally exempt small quantity universal waste generator exemption, see the general statement of reasons above.

Amend Section 66273.9, Definitions:

These proposed amendments define the terms used in proposed chapter 23. These definitions are consistent with those being added to chapter 10 of this division.

This section parallels the language found in 40 Code of Federal Regulations part 273, subpart A, section 273.9 except for the addition of the State's version of the term

“household”, used in the household exemption discussed above in the explanation of section 66273.8 and the definition of “conditionally exempt small quantity universal waste generator”. As discussed above, this definition varies from the corresponding federal definition found in 40 Code of Federal Regulations, section 261.4(b)(1).

Note that a number of definitions added by the Cathode Ray Tube Emergency Regulations are included in the final text. These definitions were added by that separate rulemaking. The necessity of these definitions is established in that rulemaking; their inclusion in the final text of this rulemaking is a non-substantive change that is necessary to avoid chaptering out the language of that emergency rulemaking.

Amend Article 2, Standards for Small Quantity Handlers of Universal Waste:

This proposed article specifies the universal waste management standards that are applicable to small quantity handlers of universal waste.

This article parallels the language found in 40 Code of Federal Regulations, part 273, subpart B.

Amend Section 66273.10, Applicability:

This proposed section applies proposed Article 2 of chapter 23 to small quantity handlers of universal waste as defined in section 66273.9. This section parallels the language found in 40 Code of Federal Regulations, section 273.10.

Amend Section 66273.11, Prohibitions:

This proposed section prohibits a small quantity handler of universal waste from disposing of, diluting, or treating universal waste except in certain instances such as responding to releases (section 66273.17) or managing universal waste (section 66273.13). As used here, “disposing” means the generator disposing directly onto land or into a nonhazardous landfill. It does not mean that a generator cannot send or take waste off-site for proper disposal. This section parallels the language found in 40 Code of Federal Regulations, section 273.11.

Amend Section 66273.12, Notification:

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This proposed section clarifies that a small quantity handler of universal waste is not required to obtain an identification number. This section parallels the language found in 40 Code of Federal Regulations, section 273.12. DTSC considered requiring small quantity handler of universal waste to obtain an identification number and solicited comments on this issue. Almost all of the comments received supported retaining the approach also used in the federal regulations

Amend Section 66273.13, Waste Management:

This proposed section specifies the management requirements that apply to small quantity handlers of universal waste. Universal waste must be managed in a manner that prevents any releases to the environment. Handlers are allowed to perform the following activities: (1) sort batteries; (2) mix batteries in one container if they are not damaged; (3) discharge batteries; (4) disassemble and remove the electrolyte from batteries; and (5) remove ampules from thermostats.

A small quantity handler of universal waste who, as a result of the activities above, generates other solid waste that exhibits characteristics of hazardous waste, as a result of the activities above, is required to manage those wastes in compliance with applicable general hazardous waste requirements of this division.

This section parallels the language found in 40 Code of Federal Regulations, section 273.13.

Amend Section 66273.14, Labeling/Marking:

This proposed amendment requires a small quantity handler of universal waste to label or mark universal waste or the containers of universal waste to clearly indicate the waste description with one of the following phrases: "Universal waste--____", "Waste ____", or "Used ____", with the blank filled in with the applicable type of universal waste such as battery(ies), thermostat(s), or lamp(s).

This section parallels the language found in 40 Code of Federal Regulations, section 273.14.

Amend Section 66273.15, Accumulation Time Limits:

This proposed section limits a small quantity handler of universal waste to an accumulation

period of one year from the date the universal waste is generated or received from another handler, unless a longer accumulation period is necessary to facilitate proper recovery, treatment, or disposal. If the accumulation period is longer than one year, the handler bears the burden of proving that a longer accumulation period is necessary for the proper recovery, treatment, or disposal.

A small quantity handler of universal waste must be able to demonstrate the length of time the universal waste has been accumulated by properly labeling/markings (section 66273.14), maintaining an inventory system, or any method that would clearly demonstrate accumulation time.

This section parallels the language found in 40 Code of Federal Regulations, section 273.15.

Amend Section 66273.16, Employee Training:

This section requires small quantity handlers of universal waste to inform employees of the proper and safe management of their universal wastes. The standard is flexible and efficient and could include options as complex as formal training or as simple as distribution of printed instructions. The employee would be informed of issues such as identifying which wastes are universal wastes, proper handling, facility specific issues such as the storage area and packaging selected by the business for its universal wastes, and proper shipping to an appropriate destination.

This section parallels the language found in 40 Code of Federal Regulations, section 273.16.

Amend Section 66273.17, Response to Releases:

This proposed amendment requires a small quantity handler of universal waste to immediately contain any releases of universal waste and handle residues appropriately by determining whether any of the resulting material is a hazardous waste. The handler is considered the generator of any resulting materials and must manage it in compliance with chapter 12 requirements.

This section parallels the language found in 40 Code of Federal Regulations, section 273.17.

Note that the Department's original (and publicly stated) interpretation of the rules for

management of broken fluorescent tubes and other materials released from universal wastes precluded management of the damaged or released materials as universal waste. However, in response to extensive comment that many persons with broken tubes would choose to illegally dispose of the tubes as nonhazardous solid waste rather than incur the expense and complexity of management under the general hazardous waste control regulations, the Department has added language to sections 66273.17, 66273.37, and 66273.54 clarifying that broken and damaged universal wastes may continue to be managed as universal wastes if repackaged according to the regulations. Discussions with the U.S. EPA's RCRA, EPCRA, and Superfund Hotline confirmed that this new language reflects the correct interpretation of federal regulations. However, rather than simply change its interpretation of this previously patently unclear provision, the Department has chosen to clarify that broken or damaged universal wastes may be repackaged and managed as universal wastes by adding language to sections 66273.17, 66273.37, and 66273.54.

Amend Section 66273.18, Offsite Shipments:

This proposed amendment prohibits a small quantity handler of universal waste from taking/sending universal waste any place other than another universal waste handler, a destination facility, or a foreign destination. Small quantity handlers of universal waste who choose to self-transport universal waste offsite are considered transporters and are subject to the requirements in article 4 of chapter 23.

This proposed section requires a small quantity handler of universal waste to ensure, prior to shipment, that the receiving handler agrees to accept the shipment of universal waste. If a shipment of universal waste is rejected by the receiving handler, it may either be shipped to a destination facility or returned to the originating handler as long as both handlers agree. If a small quantity handler of universal waste receives a shipment of nonhazardous, non-universal waste, the handler may manage the waste in compliance with applicable solid waste requirements. If, however, a shipment of hazardous waste is received, which is not a universal waste as expected, the small quantity handler of universal waste must notify the Department of the illegal shipment. The Department will provide instructions for management.

Offsite shipments of universal waste meeting the definition of hazardous materials under Department of Transportation (DOT) regulations, 49 Code of Federal Regulations parts 171 through 180, must be packaged, labeled, marked, placarded accordingly, and shipped with proper shipping papers listed under 49 Code of Federal Regulations part 172 requirements.

This section parallels the language found in 40 Code of Federal Regulations, section 273.18.

Amend Section 66273.19, Tracking Universal Waste Shipments:

This proposed section states that small quantity handlers of universal waste are not required to retain records of shipments of universal waste. This section parallels 40 Code of Federal Regulations, section 273.19.

Amend Section 66273.20, Exports:

This proposed section requires a small quantity handler of universal waste who sends universal waste to a foreign destination to comply with exporter requirements found in sections 66262.53, 66262.56(a) (1) through (4), (6), and (b) and 66262.57. Sections 66262.53, 66262.56(a) (1) through (4), (6), and (b) and 66262.57 state that an exporter of RCRA hazardous waste or non-RCRA hazardous waste shall either concurrently notify U.S. EPA and the Department of an intended export or notify only the Department of an intended export 60 days before the intended date of shipment. This requirement applies if the foreign destination is not an Organization for Economic Cooperation and Development (OECD) country specified in 40 Code of Federal Regulations, section 262.58. The small quantity handler of universal waste must also provide the transporter with the EPA Acknowledgment of Consent for the shipment.

This section parallels the language found in 40 Code of Federal Regulations part 273, subpart B, section 273.20.

Amend Article 3, Standards for Large Quantity Handlers of Universal Waste:

This proposed article specifies the universal waste management standards that apply to large quantity handlers of universal waste as defined in section 66273.9.

This section parallels the language found in 40 Code of Federal Regulations part 273, subpart C.

Amend Section 66273.30, Applicability:

This proposed section applies the requirements of Article 3 to large quantity handlers of

universal waste as defined in section 66273.9.

This section parallels the language found in 40 Code of Federal Regulations part 273, subpart C, section 273.30.

Amend Section 66273.31, Prohibitions:

This proposed section prohibits a large quantity handler of universal waste from disposing of, diluting, or treating universal waste except in certain instances such as responding to releases (section 66273.37) or managing universal waste pursuant to section 66273.33. See explanation of disposal for section 66273.11.

This article parallels the language found in 40 Code of Federal Regulations, section 273.31.

Amend Section 66273.32, Notification:

This proposed section requires a large quantity handler of universal waste to notify U.S. EPA or the Department of its universal waste handling activities in order to receive an EPA identification number. A large quantity handler of universal waste who has already notified DTSC of the U.S. EPA of its hazardous waste management activities and has obtained an identification number is not required to renotify under this section.

This section parallels 40 Code of Federal Regulations, section 273.32.

Amend Section 66273.33, Waste Management:

This proposed section specifies the waste management requirements with which large quantity handlers of universal waste must comply.

This section parallels the language found in 40 Code of Federal Regulations, section 273.33.

Subsection (a)

This proposed subsection is specific to universal waste batteries and requires batteries to be managed in a manner that prevents releases to the environment. Any universal waste battery handler who removes electrolyte or who generates other solid waste from universal

waste batteries must also determine whether the electrolyte or other wastes exhibit characteristics of hazardous waste and manage them in compliance with applicable hazardous waste regulations. A universal waste battery handler is allowed to sort batteries by type, mix battery types in one container, discharge batteries, regenerate batteries, disassemble batteries and remove electrolyte.

Subsection (b)

This proposed subsection requires universal waste thermostats to be managed in a manner that prevents releases to the environment, and specifies container requirements. The containers should be compatible with the contents of the thermostats, structurally sound, and remain closed when containing universal waste thermostats. A handler of universal waste thermostats may remove mercury-containing ampules provided that the ampules are removed in a manner that prevents breakage and a mercury clean-up system is readily available in the case of spills or leakage. The removed ampules are also considered universal wastes. The handler must also determine if the mercury, clean-up residues, or other wastes generated as a result of ampule removal exhibit characteristics of hazardous waste and manage them appropriately.

Subsection (c)

This proposed subsection requires universal waste lamps to be managed in a manner that prevents releases to the environment, and specifies container and shipping requirements. The containers shall be compatible with the contents of the lamps, structurally sound, and remain closed when containing universal waste lamps. The spent lamps may be stored and shipped in the packaging in which the new lamps came.

Amend Section 66273.34, Labeling/Marking:

This proposed section requires a large quantity handler of universal waste to label or mark universal waste items or the containers of universal waste to clearly indicate the type of universal waste. The handler shall use one of the following phrases: " Universal waste-- _____", "Waste _____", or "Used _____", with the blank filled in with the type of universal waste such as battery(ies), thermostat(s), or lamp(s).

This section parallels the language found in 40 Code of Federal Regulations, section 273.34.

Amend Section 66273.35, Accumulation Time Limits:

This proposed section limits a large quantity handler of universal waste to an accumulation period of no longer than 1 year from the date the universal waste is generated or received from another handler, unless a longer accumulation period is necessary to facilitate proper recovery, treatment, or disposal. If the accumulation period is longer than one year, the handler bears the burden of proving that a longer accumulation period is necessary for the proper recovery, treatment, or disposal. This proposed section also states that the universal waste handler must be able to demonstrate the length of time the universal waste has been accumulated by properly labeling/marketing as specified in section 66273.34, maintaining an inventory system, or any method which would clearly demonstrate accumulation time. This section parallels the language found in 40 Code of Federal Regulations, section 273.35.

Amend Section 66273.36, Employee Training:

This proposed section requires a large quantity handler of universal waste to ensure that employees who handle universal waste are thoroughly familiar with the proper handling and emergency procedures relative to types of universal waste handled at the facility. The training for large quantity handlers of universal waste differs from that for small quantity handlers of universal waste in that the large quantity handler of universal waste must formally train employees and retain records to demonstrate compliance with this section. This section parallels the language found in 40 Code of Federal Regulations, section 273.36.

Amend Section 66273.37, Response to Releases:

This proposed section requires a large quantity handler of universal waste to immediately contain any releases of universal waste and handle residues appropriately. Any material resulting from such releases must be managed in compliance with applicable requirements of chapters 10 through 21. In the case of a release, the handler is considered the generator of the material released, and is responsible for managing it in compliance with the requirements under chapter 12 of this division. This section parallels the language found in 40 Code of Federal Regulations, section 273.37.

Note that the Department's original (and publicly stated) interpretation of the rules for management of broken fluorescent tubes and other materials released from universal wastes precluded management of the damaged or released materials as universal waste. However, in response to extensive comment that many persons with broken tubes would choose to illegally dispose of the tubes as nonhazardous solid waste rather than incur the expense and complexity of management under the general hazardous waste control

regulations, the Department has added language to sections 66273.17, 66273.37, and 66273.54 clarifying that broken and damaged universal wastes may continue to be managed as universal wastes if repackaged according to the regulations. Discussions with the U.S. EPA's RCRA, EPCRA, and Superfund Hotline confirmed that this new language reflects the correct interpretation of federal regulations. However, rather than simply change its interpretation of this previously patently unclear provision, the Department has chosen to clarify that broken or damaged universal wastes may be repackaged and managed as universal wastes by adding language to sections 66273.17, 66273.37, and 66273.54.

Amend Section 66273.38, Offsite Shipments:

This proposed section allows a large quantity handler of universal waste to send universal waste only to another universal waste handler, a destination facility, or a foreign destination. A universal waste handler may self-transport universal waste offsite pursuant to the universal waste transporter requirements in article 4 of chapter 23.

This proposed section also states that a large quantity handler of universal waste must ensure prior to shipment that the receiving handler agrees to accept the shipment of universal waste. If a shipment of universal waste is rejected by the receiving handler, it may either be shipped to a destination facility or returned to the originating handler as long as both handlers agree. If a universal waste handler receives a shipment of nonhazardous, non-universal waste, the handler may manage the waste in compliance with applicable solid waste requirements. If, however, a shipment of hazardous waste is received that is not a universal waste as expected, the universal waste handler must notify the Department of the illegal shipment.

Offsite shipments of universal waste that meet the definition of hazardous materials under Department of Transportation (DOT) regulations, 49 Code of Federal Regulations parts 171 through 180, must be packaged, labeled, marked, placarded accordingly, and shipped with proper shipping papers listed under 49 Code of Federal Regulations part 172 requirements.

This section parallels the language found in 40 Code of Federal Regulations, section 273.38.

Amend Section 66273.39, Tracking Universal Waste Shipments:

This proposed section requires a large quantity handler of universal waste to maintain

records of universal waste shipments sent from or received at the facility. The records of shipments received at the facility must include the name and address of the originating universal waste handler, the quantity and type of universal waste, and the date of receipt of the universal waste shipment. The records of shipments sent from the facility must include the name and address of the destination facility, the quantity and type of universal waste, and the date of shipment from the facility.

This section also states that a universal waste handler must retain these records for a period of at least three years from the date a shipment leaves the facility or a shipment is received at the facility.

This section parallels the language found in 40 Code of Federal Regulations, section 273.39.

Amend Section 66273.40, Exports:

This proposed section requires a large quantity handler of universal waste who sends universal waste to a foreign destination other than those Organization for Economic Cooperation and Development (OECD) countries specified in section 66262.58(a)(1) to comply with exporter requirements found in sections 66262.53, 66262.56(a) (1) through (4), (6), (b) and 66262.57. Sections 66262.53, 66262.56(a) (1) through (4), and (6), (b) and 66262.57 state that an exporter of RCRA hazardous waste or non-RCRA hazardous waste shall either concurrently notify U.S. EPA and the Department of an intended export or notify only the Department of an intended export, respectively, 60 days before the intended date of shipment. The universal waste handler must also provide the universal waste transporter with the EPA Acknowledgment of Consent regarding the shipment, where applicable. This section parallels the language found in 40 Code of Federal Regulations, section 273.40.

Amend Article 4, Standards for Universal Waste Transporters:

This proposed article specifies the universal waste management standards applicable to universal waste transporters. This article parallels the language found in 40 Code of Federal Regulations subpart D.

Amend Section 66273.50, Applicability:

This proposed section applies this proposed article to universal waste transporters as

defined in section 66273.9 of chapter 23. This section parallels the language found in 40 Code of Federal Regulations section 273.50.

Amend Section 66273.51, Prohibitions:

This proposed section prohibits transporters from performing certain activities. Universal waste transporters are prohibited from disposing of, diluting, or treating universal waste except in the course of responding to releases as stated in section 66273.54. Regarding "disposal", see discussion for section 66273.11. This section parallels the language found in 40 Code of Federal Regulations, section 273.51.

Amend Section 66273.52, Waste Management:

This proposed section applies the Department of Transportation (DOT) requirements in 49 Code of Federal Regulations part 171 through 180 to universal waste transporters while they are transporting any universal waste that meets the definition of a hazardous material under 49 Code of Federal Regulations 171.8. Under DOT requirements a material is only considered a hazardous waste if it is subject to the Hazardous Waste Manifest requirements. Since universal wastes are not subject to hazardous waste manifest requirements, they are not considered hazardous wastes for purposes of compliance with DOT requirements. Therefore, shipments of universal waste shall not be labeled as "hazardous waste" or modified by adding the word "waste" to the shipping name. This section parallels the language found in 40 Code of Federal Regulations, section 273.52.

Amend Section 66273.53, Storage Time Limits:

This proposed section allows a Universal waste transporter to store Universal waste only at a transfer facility for up to six days in an area that is not zoned industrial, or up to ten days if the area is zoned industrial. A ten day storage period applies for universal waste batteries in all areas because the (FBMA) mandates a ten day storage period at transfer facilities that are not authorized as storage facilities (and are not acting as handlers of universal waste). If the Universal waste transporter stores the universal waste for more than the applicable time allowed, the transporter becomes a handler and must comply with the Universal waste handler requirements in article 2 or 3 of this chapter while storing the Universal waste.

This section parallels the language found in 40 Code of Federal Regulations, section 273.53, except that this section is more stringent, due to the 6 day storage limit in non-

industrial zones, which is consistent with current California requirements under section 66263.18 and Health and Safety Code section 25123.3.

Amend Section 66273.54, Response to Releases:

This proposed section requires a Universal waste transporter to immediately contain any releases of universal waste and handle residues appropriately. In the case of a release, a transporter is considered the generator of the material released, and must manage it in compliance with chapter 12 requirements if the waste is determined to be a hazardous waste. This section parallels the language found in 40 Code of Federal Regulations, section 273.54.

Note that the Department's original (and publicly stated) interpretation of the rules for management of broken fluorescent tubes and other materials released from universal wastes precluded management of the damaged or released materials as universal waste. However, in response to extensive comment that many persons with broken tubes would choose to illegally dispose of the tubes as nonhazardous solid waste rather than incur the expense and complexity of management under the general hazardous waste control regulations, the Department has added language to sections 66273.17, 66273.37, and 66273.54 clarifying that broken and damaged universal wastes may continue to be managed as universal wastes if repackaged according to the regulations. Discussions with the U.S. EPA's RCRA, EPCRA, and Superfund Hotline confirmed that this new language reflects the correct interpretation of federal regulations. However, rather than simply change its interpretation of this previously patently unclear provision, the Department has chosen to clarify that broken or damaged universal wastes may be repackaged and managed as universal wastes by adding language to sections 66273.17, 66273.37, and 66273.54.

Amend Section 66273.55, Offsite Shipments:

This proposed section allows a Universal waste transporter to transport Universal waste only to a Universal waste handler, a destination facility, or a foreign destination. Offsite shipments of universal waste that meet the definition of hazardous materials under Department of Transportation (DOT) regulations, 49 Code of Federal Regulations 171.8 are required to be packaged, labeled, marked, placarded accordingly, and shipped with proper shipping papers required under 49 Code of Federal Regulations part 172. This section parallels the language found in 40 Code of Federal Regulations, section 273.55.

Amend Section 66273.56, Exports:

This proposed section specifies that a universal waste transporter transporting a shipment to a foreign destination other than to those OECD countries specified in section 66262.58(a)(1) may not accept a shipment if the shipment does not conform to the EPA Acknowledgment of Consent accompanying the shipment. The universal waste transporter is also responsible for assuring that the shipment reaches the facility designated by the person initiating the shipment. This section parallels the language found in 40 Code of Federal Regulations, section 273.56.

Article 5, Standards for Destination Facilities:

This proposed article specifies the Universal waste management standards applicable to destination facilities.

Amend Section 66273.60, Applicability:

This proposed section subjects a destination facility as defined in section 66273.9 to the applicable requirements of chapters 14 through 16, 18, and 20, which include the standards for: (1) operators of hazardous waste transfer, treatment, storage, and disposal facilities; and (2) land disposal restrictions; and permit requirements. This section parallels the language found in 40 Code of Federal Regulations, section 273.60.

Note, however, that universal waste recycling facilities are required to obtain a State hazardous waste facility permit for their recycling operation, whereas they would only be required to obtain a storage permit under specific conditions under the federal hazardous waste control law. This requirement already exists in State law and is not affected by this proposed regulatory action.

Amend Section 66273.61, Offsite Shipments:

This proposed section allows a destination facility to send universal waste only to a Universal waste handler, another destination facility, or a foreign destination. If a destination facility rejects a shipment of universal waste, the facility must notify the shipper of the rejection and discuss whether to return the universal waste or to send it to another destination facility. If a destination facility receives a shipment of nonhazardous, non-universal waste, the destination facility may manage the waste in compliance with the applicable solid waste requirements. Any shipments received at the destination facility

that are not universal wastes as expected, must be reported to the Department as illegal shipments. This section parallels the language found in 40 Code of Federal Regulations, section 273.61.

Amend Section 66273.62, Tracking Universal Waste Shipments:

This proposed section requires a destination facility to keep records of universal waste shipments received at the facility. The records may take the form of a log, invoice, manifest, bill of lading, or other type of shipping document. The following information shall be included in the record: 1) the name and address of the Universal waste handler, destination facility, or foreign destination; 2) the quantity of each type of Universal waste; and 3) date of shipment.

This section parallels the language found in 40 Code of Federal Regulations, section 273.62, except that the reference to pesticides was deleted, since pesticides will not be a designated universal waste in California.

Amend Article 6, Import Requirements:

This proposed article specifies the universal waste management standards applicable to shipments of universal waste imported into the United States.

Amend Section 66273.70, Imports:

This proposed section subjects a person importing universal waste into the United States to the applicable universal waste handler, transporter, or destination facility requirements of this chapter. Persons managing universal waste imported from an Organization for Economic Cooperation and Development (OECD) country as specified in section 66262.58(a)(1) are subject to requirements of this section, in addition to the requirements of chapter 12, of this division. This section parallels the language found in 40 Code of Federal Regulations, section 273.70 in the manner that the federal export/import regulations were previously adopted into the State's hazardous waste control law.

Article 7: Standards for CRT Material Handlers

The text of this article has been added as a non-substantive change to the final text of this rulemaking to incorporate and make these regulations consistent with the changes made

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by the Cathode Ray Tube Emergency Regulations. This text is added to avoid chaptering out the changes made by those regulations, but the necessity of substance of the provisions of this article is not required to be and is not justified in this rulemaking. However, it has been separately justified by the Cathode Ray Tube Emergency Regulations.